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ABSTRACT

This study sought to describe graduate students' opinions of selected learning activities encountered in large-group, teacher-led instructional contexts. The subjects, 40 graduate students of instructional technology at a major western university, completed a questionnaire. The instrument asked subjects to rate each of ten alternative learning activities along five dimensions: frequency the activity is encountered; interest in the activity; effectiveness of the activity as a learning tool; motivational appeal of the activity; and last, desire for greater exposure to the given activity. Results indicated that lecture is the most frequently encountered activity, while also the least motivating and effective. Further, subjects indicated a strong preference for greater exposure to more active, challenging activities such as problem solving, case studies, and small group work. Four statistical tables ranking the ten learning activities are included, and an example of the instrument used to collect data is appended. (Author/KRN)

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What Motivates Graduate Students? A Descriptive Study

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National Convention, January 1993
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Abstract

This study sought to describe graduate students' opinions of selected learning activities encountered in large-group, teacher-led instructional contexts. The subjects, forty graduate students of instructional technology at a major western university, completed a questionnaire. The instrument asked subjects to rate each of ten alternative learning activities along five dimensions: frequency the activity is encountered; interest in the activity; effectiveness of the activity as a learning tool; motivational appeal of the activity; and last, desire for greater exposure to the given activity. Results indicated that lecture is the most frequently encountered activity, while also the least motivating and effective. Further, subjects indicated a strong preference for greater exposure to more active, challenging activities such as problem solving, case studies, and small group work.

Instructional design theory and models stress the criticality of engaging students in learning activities requiring overt performance. Current constructivist conceptions of the learning process, however, suggest that those activities which provide opportunity to utilize existing knowledge and experience will be most effective. Designers and teachers are challenged to select powerful, varied learning activities that will support higher-order learning outcomes and meaningful knowledge construction.

The present study was conducted to determine which kinds of learning activities certain graduate students find most meaningful, motivating, and effective. The study seeks to describe students' opinions regarding ten selected learning activities.

Method

Subjects

Subjects included 40 adult graduate students of instructional technology at a large university in Northern California.

Instrument and procedure

A questionnaire was designed and pilot-tested for the purpose of ascertaining subjects' opinions about selected learning activities, including the following: brainstorming, problem solving, case studies, lecture, structured note taking, games, role playing, responding to written questions, responding to oral questions, and small-group work. The activities were selected because they are consistent with the types of activities employed by the author in conducting graduate courses.

The seven-page instrument began with a cover letter explaining the intent of the study and a sample item. The body of the instrument was built upon a consistent series of items that was presented for each of the ten activities in question.

The format for each learning activity, as shown in Appendix A, was as follows: to begin, the given activity was identified and defined. The first three items asked for ratings on ten-point scales. The first item asked the subject to rate how often s/he encountered the activity; the second asked for a rating regarding interest in the given activity; the third item asked for a rating of the effectiveness of the activity as a learning tool. The fourth item asked whether the subject found the given activity motivating and required a "yes/no" response. It was followed by a space for comment. The fifth item asked if the subject would like to do the given activity more often. Finally, a prompt to provide written suggestions for improving the given activity was provided. At the end of the instrument, subjects could fill-in their own learning activities (not specified by the author) and answer the same series of questions for that activity.

The instrument was administered to two intact sections of an introductory instructional design (ID) seminar and to one intact section of an advanced ID seminar. The researcher began by briefly describing the purpose of the study and by guiding subjects through completion of the sample item. Subjects completed the instrument in silence over fifteen minutes prior to the start of their regular classes. Forty subjects responded to the questionnaire.

Results

Table 1 shows the means and standard deviations for the frequency ratings by activity. Lecture received the highest mean rating of 9.6 in terms of frequency while games and role playing tied for the lowest rating, with mean ratings of 4.4, respectively.

Table 1: Mean Ratings of Perceived Activity Frequency		
Activity	Mean	Standard Deviation
Brainstorming	6.0	2.6
Problem Solving	5.7	2.0
Case Studies	5.8	2.6
Lecture	9.6	1.5
Structured Notes	6.4	2.3
Games	4.4	2.3
Role Plays	4.4	2.4
Discussion/Prep'd Ques.	6.4	2.5
Oral Questions	8.0	2.0
Small Grp Work	7.1	2.1

Table 2 shows the means and standard deviations for interest ratings by activity. Brainstorming and small group work were rated as the most interesting types of learning activities with average ratings of 8.0, respectively. Problem solving and case studies were also highly rated. Conversely, subjects indicated that they found "lecture" as the least interesting kind of learning activity, as it had an average rating of 5.9.

Table 2: Mean Ratings of Interest in Activities		
Activity	Mean	Standard Deviation
Brainstorming	8.0	1.9
Problem Solving	7.8	1.6
Case Studies	7.9	2.0
Lecture	5.9	2.3
Structured Notes	7.5	2.1
Games	7.1	2.2
Role Plays	6.5	2.7
Discussion/Prep'd Ques.	6.9	2.2
Oral Questions	6.0	2.6
Small Grp Work	8.0	1.9

Table 3 indicates subjects' ratings of the effectiveness of the activities as learning experiences. They rated case studies as most effective, with this type of activity receiving an average rating of 8.5. Problem solving, case studies, small group work, and brainstorming also received high average ratings of 8.0 or more. Lecture received the lowest mean rating of 5.9, indicating that subjects see this type of "activity" as least effective of the given choices.

Table 3: Mean Ratings of Effectiveness as Learning Tool		
Activity	Mean	Standard Deviation
Brainstorming	8.0	1.9
Problem Solving	8.4	1.6
Case Studies	8.5	1.4
Lecture	5.9	2.0
Structured Notes	7.5	2.3
Games	7.2	2.3
Role Plays	7.2	2.2
Discussion/Prep'd Ques.	7.3	2.2
Oral Questions	6.7	2.5
Small Grp Work	8.2	1.7

Table 4 shows the proportions of the 40 subjects' responses to questions concerning whether they found a given activity motivating and whether they wished to "do the activity" more often. The "ns" option stood for "not sure" for those who were non-committal.

Results indicate that subjects find problem solving and case studies to be the most motivating of the activities considered. A proportion of .825 identified each of these as motivating. Conversely, subjects indicated that lecture was the least motivating activity at a proportion of .35. However, a proportion of .375 expressed uncertainty as to whether or not they found a lecture to be motivating.

Subjects further indicated a preference for more problem solving activities, at a proportion of .775. Other activities to which they would like more exposure included case studies, brainstorming, and small group work.

Items at the end of the instrument allowed subjects to identify other learning activities not presented by the researcher and to answer the same series of question posed for the given activities. Respondents identified student presentations, feedback sessions with other students, individualized activities, independent study, field trips, expert lectures, simulations, and multimedia or computer-assisted presentations as other viable types of learning activities.

Discussion

The present study revealed that the surveyed graduate students do have definite opinions regarding the motivational appeal and effectiveness of various kinds of learning activities. It is interesting to note that while subjects found lectures to be unmotivating and ineffective, this type of activity is the one they most frequently encounter in their graduate courses. It seems safe to say, further, that lecturing is not an ideal means of furthering knowledge construction by students.

Table 4: Proportions of Motivational and Repetition Opinions by Activity						
Activity	Is it motivating?			Do more often?		
	yes	no	ns	yes	no	ns
Brainstorming	.80	.10	.10	.675	.125	.20
Problem solving	.825	.025	.15	.775	.075	.15
Case studies	.825	.05	.125	.75	.10	.15
Lecture	.275	.35	.375	.175	.625	.20
Structured note taking	.50	.325	.175	.45	.35	.20
Games	.75	.125	.125	.575	.225	.20
Role playing	.60	.20	.20	.525	.275	.20
Written questions	.625	.20	.175	.575	.225	.20
Oral questions	.525	.35	.125	.375	.425	.20
Small group work	.775	.10	.125	.70	.20	.10

Subjects indicated a strong desire for more challenging learning activities such as problem solving, case studies, role playing, and brainstorming. Findings will guide the author in developing instructional strategies that incorporate activities that are both motivating and effective. Other s working with graduate students of instructional design or technology are encouraged to employ the question format presented in Appendix A toward determining their own students' preferences. Future studies of this sort will be more valuable as they engage greater numbers of subjects from diverse institutions in an effort to ferret out more generalizable findings.

Appendix A

BRAINSTORMING ***(A process for generating any and all ideas without criticism.)***

How ***often*** have you encountered this activity?

Never 1 2 3 4 5 6 7 8 9 10 Often

Rate your ***interest*** level in brainstorming activities.

Low 1 2 3 4 5 6 7 8 9 10 High

How do you rate brainstorming in terms of ***effectiveness*** as a learning tool?

Low 1 2 3 4 5 6 7 8 9 10 High

Do you find brainstorming activities ***motivating***? Yes __ No __ Not sure __

Why or why not? _____

Would you like to do this type of activity ***more often***? Yes __ No __ Not sure __

List on the back ***suggestions*** you have for improving a brainstorming activity.